Serial No.: 10/071,040 Filed: February 8, 2002

Page : 2 of 6

## **AMENDMENTS TO THE CLAIMS:**

This listing of claims replaces all prior versions and listings of claims in the application:

## Listing of Claims:

1. (Currently Amended) A composition comprising:

an uncrosslinked styrenic block copolymer; and

- a fully cross-linked thermoplastic vulcanizate comprising a substantially fully cross-linked rubber, wherein the rubber is derived from a polymer that includes terminal and non-terminal unsaturation.
- 2. (Original) The composition of claim 1, wherein the styrenic block copolymer is selected from the group consisting of A-B-A triblock copolymers, A-B-A-B tetrablock copolymers, A-B-A-B-A pentablock copolymers, and mixtures thereof.
- 3. (Original) The composition of claim 2, wherein A is a hard block comprising vinylarene monomers and B is a soft block comprising olefinic monomers.
- 4. (Original) The composition of claim 2, wherein the styrenic block copolymer has a styrene-ethylene butylene-styrene structure, a styrene-ethylene propylene-styrene structure, or a styrene-ethylene ethylene propylene-styrene structure.
- 5. (Previously Presented) The composition of claim 1, wherein the thermoplastic resin is a polyolefin resin.
  - 6. (Canceled)
- 7. (Previously Presented) The composition of claim 1, wherein the rubber is ethylenepropylene-diene copolymer rubber.
- 8. (Original) The composition of claim 1, wherein the amount of the styrenic block copolymer is at least about 5 parts per 100 parts of the thermoplastic vulcanizate.
- 9. (Original) The composition of claim 8, wherein the amount of the styrenic block copolymer is between about 5 parts and 400 parts per 100 parts of the thermoplastic vulcanizate.

Serial No.: 10/071,040 Filed: February 8, 2002

Page : 3 of 6

10. (Original) The composition of claim 9, wherein the amount of the styrenic block copolymer is between about 15 parts and 300 parts per 100 parts of the thermoplastic vulcanizate.

- 11. (Original) The composition of claim 1, further comprising mineral oil.
- 12. (Original) The composition of claim 8, further comprising mineral oil.
- 13. (Original) The composition of claim 12, wherein the amount of the mineral oil is at least about 10 parts per 100 parts of the thermoplastic vulcanizate.
- 14. (Original) The composition of claim 13, wherein the amount of the mineral oil is between about 20 parts and 800 parts per 100 parts of the thermoplastic vulcanizate.
- 15. (Original) The composition of claim 14, wherein the amount of the mineral oil is between about 25 parts and 600 parts per 100 parts of the thermoplastic vulcanizate.
  - 16. (Original) A composition of claim 1 having a hardness less than about 50 Shore A.
- 17. (Original) A composition of claim 1 having a hardness between about 10 and 45 Shore A.
- 18. (Original) A composition of claim 1 having a hardness between about 15 and 35 Shore A.
- 19. (Original) A composition of claim 1 having a 22 hour compression set at 70°C of less than about 30%.
- 20. (Original) A composition of claim 17 having a 22 hour compression set at 70°C of between about 10% and 25%.
- 21. (Original) A composition of claim 18 having a 22 hour compression set at 70°C of between about 15% and 23%.
  - 22. (Currently Amended) A composition comprising:
- a styrenic block copolymer having a styrene-ethylene butylene-styrene structure, a styrene-ethylene propylene-styrene structure, or a styrene-ethylene ethylene propylene-styrene structure, wherein the styrenic block copolymer is uncrosslinked; and
- a substantially fully cross-linked blend of polypropylene and an a substantially fully cross-linked ethylene-propylene-diene copolymer rubber.

Serial No.: 10/071,040 Filed: February 8, 2002

Page : 4 of 6

23. (Original) The composition of claim 22, further comprising mineral oil.

24. (New) A composition comprising:

an uncrosslinked styrenic block copolymer; and

a thermoplastic vulcanizate comprising a substantially fully cross-linked rubber, wherein the rubber is derived from ethylene-propylene-diene copolymer rubber (EPDM).

- 25. (New) The composition of claim 1, wherein the rubber is derived from ethylene-propylene-diene copolymer rubber (EPDM).
- 26. (New) A method of making a polymeric composition comprising:

  dynamically vulcanizing a cross-linkable rubber in a polyolefin; and then

  melt blending the dynamically vulcanized rubber in the polyolefin with a

  styrenic block copolymer.
- 27. (New) The method of claim 26, wherein the cross-linkable rubber is derived from ethylene-propylene-diene copolymer rubber (EPDM).
  - 28. (New) The method of claim 26, wherein the polyolefin includes polypropylene.
- 29. (New) The method of claim 26, wherein the styrenic block copolymer is selected from the group consisting of styrene-ethylene-butylene-styrene copolymer, styrene-ethylene-propylene-styrene copolymer and styrene-ethylene-ethylene-propylene-styrene copolymer.

## **REMARKS**

Claims 1-5, and 7-29 are pending in the case. Claims 1, and 22 are currently amended, and claims 24-29 are new. New, and amended claims are fully supported by the specification. For example, the requirement in claim 1 that the rubber is derived from a polymer that includes terminal, and non-terminal unsaturation is supported by the disclosure at page 2, lines 1-2 of the

Serial No.: 10/071,040 Filed: February 8, 2002

Page : 5 of 6

specification that a rubber can be derived from an ethylene-propylene-diene copolymer (EPDM), a polymer known to have <u>terminal</u>, and <u>non-terminal unsaturation</u>.

The Examiner did not consider the newly cited Masao reference, (reference AFF from form 1449), an English translation of Japanese Pat. No. 60-166339, because it was submitted without payment of fee. However, in the Information Disclosure Statement filed July 29, 2003, it was requested to "apply any other charges or credits to deposit account 06-1050." Therefore, the Masao reference should be considered.

The Examiner objected to claim 1 because it lacked a period. The appropriate period has been added.

Claims 22, and 23 were rejected under 35 U.S.C. §102(b) as being anticipated by Tsujimoto et al., U.S. Pat. No. 5,597,867 ("Tsujimoto"). Claim 22 as currently amended relates to a composition including a styrenic block copolymer having a styrene-ethylene butylenestyrene structure, a styrene-ethylene propylene-styrene structure, or a styrene-ethylene ethylene propylene-styrene structure, in which the styrenic block copolymer is uncrosslinked; and a blend of polypropylene, and a substantially fully cross-linked ethylene-propylene-diene copolymer rubber. Claim 23 depends on claim 22. Tsujimoto describes blends prepared by combining a block copolymer, a rubber, a thermoplastic resin, and a catalyst, and then dynamically vulcanizing the entire combination to form the final product. In the course of this process, the block copolymer is crosslinked as well. In contrast, Applicants' composition is prepared by dynamically vulcanizing a blend of a rubber, thermoplastic resin, and catalyst, and then combining the dynamically vulcanized product (the "crosslinked thermoplastic vulcanizate") with a styrenic block copolymer. Because dynamic vulcanization takes place prior to addition of the block copolymer, the block copolymer itself is not crosslinked. Therefore, Tsujimoto does not disclose the composition covered by claim 22, and 23. As a result, the 35 U.S.C. §102(b) rejection of these claims should be withdrawn.

Claims 1-23 stand rejected under 35 U.S.C. §102(e)/§103 over Okuda, U.S. Pat. No. 6,410,623 ("Okuda"). Okuda describes compositions that include (a) a styrenic block copolymer, and (b) a blend of a polyolefin and a rubber derived from ethylene/alpha-olefin

Applicant: Tonya McBride et al.

Serial No.: 10/071,040 Filed: February 8, 2002

Page : 6 of 6

copolymer. Ethylene /alpha-olefin copolymers contain <u>only terminal</u> unsaturation. Applicants' rubbers as now claimed are derived from polymers that include <u>both terminal</u>, and <u>non-terminal</u> <u>unsaturation</u>. In fact, polymers including <u>both terminal and non-terminal unsaturation</u> are more easily crosslinked than polymers containing <u>only terminal unsaturation</u>. Applicants request that the rejection based on Okuda be withdrawn.

Enclosed is a \$90.00 check for excess claim fees and a \$110.00 check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Robert C. Nabinger Reg. No. 33,431

Attorney's Docket No.: 01464-067001 / TPV/SEBC

Date: February 19, 2004

Fish & Richardson P.C. 225 Franklin Street Boston, MA 02110-2804 Telephone: (617) 542-5070

Facsimile: (617) 542-8906

20784665.doc